

Theory of Knowledge Exhibition

23. How important are material tools in the production or acquisition of knowledge?

Candidate Code:

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One might initially assume that knowledge can be solely attained through intellectual processes, but the role of material tools in knowledge production and acquisition raises intriguing questions about their significance and impact.

GDC Calculator



Figure 1: *An Image of my GDC calculator*

This is an image of my calculator, specifically used in my Mathematics class, which aids in the acquisition of knowledge within subjects like physics and business. Initially my sister's, this calculator's significance lies in its purpose as a tool, rather than its origin; starting as a basic scientific calculator, I later discovered its full potential, jailbreaking it to run third-party programs and customizing it, uncovering unconventional uses beyond its original functionality. It serves as a powerful tool for efficient mathematical calculations, streamlining problem-solving processes and providing quick solutions. However, while the calculator enhances computational accuracy

and expedites calculations, it raises intriguing questions about the extent to which it may hinder conceptual understanding and the ability to apply mathematical principles without reliance on technology.

I primarily use the TI-84 calculator in Math AA SL, specifically to graph functions, such as " $f(x) = \sin(x)$." The TI-84 empowers us to graph various equations and visually analyze their behavior, facilitating a deeper understanding of mathematical concepts. However, while calculators like this one contribute to the production of knowledge, they also prompt considerations about the potential limitations of relying solely on calculators for mathematical exploration and the balance between computational convenience and conceptual comprehension.

At its core, this calculator exemplifies the role of material tools in the production or acquisition of knowledge, particularly in the realm of mathematics. Its real-world context and utilization highlight the benefits and potential drawbacks of relying on calculators for mathematical tasks, provoking reflection on the extent to which technology shapes our understanding and application of mathematical principles.

Laptop



Figure 2: *An Image of my old laptop*

This is an image of my old laptop, which holds great sentimental value for me. It played a crucial role in my life during the mid-covid period when the school required the use of laptops for health reasons. Initially, I was using a desktop at home, but this laptop, which was previously my mother's, became my primary device. Due to a weak battery, it served as a desktop in her office, always connected to a power source.

This laptop set off a chain of events that led me down a rabbit hole of exploration surrounding Linux and free and open-source software (FOSS). It was the first time I ran a virtual machine on this device, which allowed me to run a computer within my computer using specialized software. I experimented with the Manjaro Linux operating system and eventually decided to permanently install Linux, wiping away the Windows OS.

Over the years, this laptop endured numerous damages, but I never replaced it. I constantly

repaired it, navigating through various Linux distributions and even acquiring programming skills along the way. The laptop's physical presence was essential as it provided the hands-on experience necessary for tasks such as setting up virtual machines and installing a different operating system entirely.

This object, the laptop, exemplifies the importance of material tools in the production and acquisition of knowledge. Without it, my exploration of Linux and FOSS would have been limited, and the practical aspects of working with virtual machines and operating system installations would have remained purely theoretical. The laptop served as a tangible gateway to expand my understanding and capabilities in the realm of technology and software.

Thus, the laptop represents how material tools can enhance knowledge acquisition by enabling direct engagement and practice. Its real-world context highlights the significant role it played in my personal journey of discovery, making it a prime example of the link between material tools and knowledge production.

Personal Journal



Figure 3: *An Image of my personal Journal*

This is a picture of my personal journal, which I use to reflect on the events of each day and occasionally plan for the following day. My personal journal serves as a tool for introspection, recording my thoughts, experiences, and aspirations. The act of writing allows me to process my thoughts, analyze situations, and gain insights that may have otherwise eluded me. Simply putting pen to paper helps me solidify concepts, identify patterns, and make connections that contribute to the production of new knowledge. It serves as a repository of knowledge that I can refer back to in my learning journey, facilitating the generation of new ideas, promoting self-discovery, and aiding in personal growth and development. Through consistent journaling, I have discovered the power of organizing thoughts, gaining clarity, and finding solutions. The physical journal itself, as a material tool, plays a vital role in my acquisition of self-knowledge and supports the production of new knowledge.

Conclusion

To conclude the exploration of material tools in knowledge production and acquisition unveils their significant role in enhancing our understanding and capabilities. The laptop, calculator, and personal journal exemplify the diverse ways in which these tools facilitate direct engagement, practical application, and introspective reflection, ultimately contributing to the production of new ideas, self-discovery, and personal growth. These objects demonstrate that material tools are not mere accessories, but integral components that shape our learning journey and expand the boundaries of knowledge acquisition.